



PCT/AU2004/001050

REC'D 24 AUG 2004

WIPO

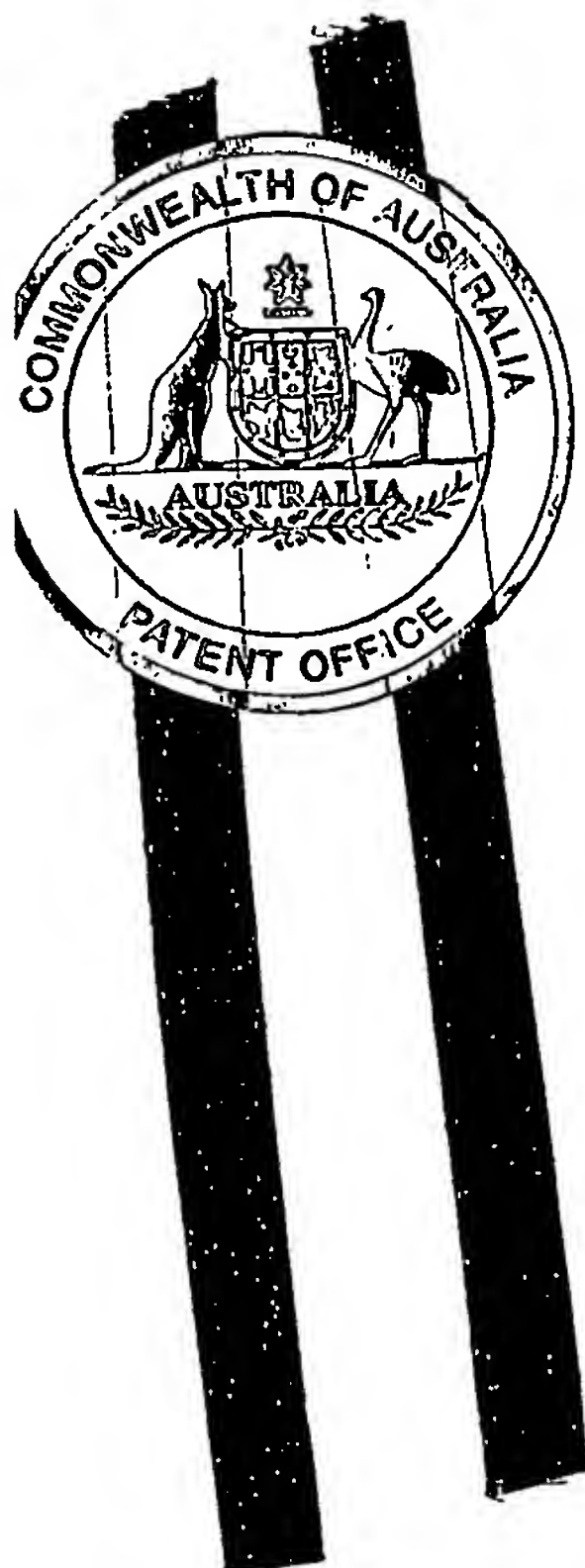
PCT

**PRIORITY  
DOCUMENT**

SUBMITTED OR TRANSMITTED IN  
COMPLIANCE WITH RULE 17.1(a) OR (b)

**Patent Office  
Canberra**

I, JULIE BILLINGSLEY, TEAM LEADER EXAMINATION SUPPORT AND SALES hereby certify that annexed is a true copy of the Provisional specification in connection with Application No. 2004901440 for a patent by TRONMIST PTY LTD as filed on 19 March 2004.



WITNESS my hand this  
Seventeenth day of August 2004

*J. Billingsley*

**JULIE BILLINGSLEY  
TEAM LEADER EXAMINATION  
SUPPORT AND SALES**

P/00/009  
Regulation 3.2

AUSTRALIA

---

*Patents Act 1990*

---

## **PROVISIONAL SPECIFICATION**

Invention Title: "A METHOD AND APPARATUS FOR  
MARKING BAKERY PRODUCTS"

The invention is described in the following statement:

TITLE

"A METHOD AND APPARATUS FOR MARKING BAKERY PRODUCTS"

FIELD OF THE INVENTION

5 This invention relates to a method and apparatus for marking bakery products. In particular, the invention relates primarily to the marking of biscuits for animals and humans. However, it should be appreciated that the method may be used for other bakery products such as breads, pastries or the like.

BACKGROUND OF THE INVENTION

10 For many years biscuit manufacturers have been branding their biscuits so that consumers are able to recognise the type of biscuits they are consuming. This allows consumers to identify the biscuit and hopefully repurchase the biscuit if it is to their taste. It also allows manufactures to place other types of adverting material on their biscuits if the manufacturers  
15 so desire.

The most common method of branding biscuits is to cause valley and ridges to be formed in the biscuit to provide viewable shapes, patterns, letters and/or words. The valleys and/or ridges are usually obtained by shaping biscuit dough prior to baking of the biscuits. The shaping of the  
20 biscuits is usually obtained by making a mould that has corresponding valleys and/or ridges located within the mould. Biscuits dough is pressed into the mould and when the dough is removed, the top of the biscuit dough has the associated valleys and/or moulds. The biscuit dough is then baked to form biscuits with desired markings.

There are several problems with marking biscuits using a mould. Firstly, the moulds are expensive to manufacture and can only be used to provide only that shape. Secondly, placing biscuit dough into the moulds is labour intensive and time consuming. Lastly, the shapes, patterns, letters and/or words formed on the biscuit are of the same colour biscuit as the other part of the biscuit. Therefore, the shapes, patterns, letters and/or words are often difficult to recognise. A consumer therefore has to make a conscious effort to look at the top of the biscuit to be able to read the shape, patterns, letters and/or words.

10

#### OBJECT OF THE INVENTION

It is an object of the invention to overcome or alleviate one or more of the above disadvantages or to provide the consumer with a useful or commercial choice.

#### SUMMARY OF THE INVENTION

15

In one form, although not necessarily the broadest or only form, the invention resides in a method of marking bakery products including the steps of:

mixing a bakery dough to make a bakery product

applying an ink to the bakery dough and

20

baking the bakery dough to make the bakery product;

wherein the ink comprises:

glycerol between the percentages 10 to 60 percent by volume

solvent between the percentages 10 to 60 percent by volume

sucrose between the percentages 5 to 30 percent by volume

water between the percentages 1 to 35 percent by volume  
colouring agent between the percentages 0.5 to 20 percent by  
volume.

5 The mixing of the bakery product may be completed by hand and/or  
using machinery.

The ink may be applied manually or automatically through the use of a  
machine. Preferably, the ink is applied to the bakery product using a stamp.

The bakery dough is normally baked in a conventional manner, that is,  
using an oven.

10 In another form, the invention resides in ink, for use in marking bakery  
products, comprising:

glycerol between the percentages 10 to 60 percent by volume  
solvent between the percentages 10 to 60 percent by volume  
sucrose between the percentages 5 to 30 percent by volume  
15 water between the percentages 1 to 35 percent by volume  
colouring agent between the percentages 0.5 to 20 percent by  
volume.

Preferably the ink comprises;

glycerol between the percentages 10 to 55 percent by volume  
20 solvent between the percentages 10 to 60 percent by volume  
sucrose between the percentages 5 to 30 percent by volume  
water between the percentages 5 to 35 percent by volume  
colouring agent between the percentages 0.5 to 20 percent by  
volume.

The solvent is preferably an organic solvent. Solvents that may be used include ethanol, isopropyl alcohol, and propanol. Most preferably, the solvent is ethanol or isopropyl alcohol.

5 The colouring agent may vary depending on the desired colour of the ink. Suitable colouring agents include pigments or dyes such as allura red 129, carbon black 153, sunset yellow 110, carmiosine 122, carmines 120, fast green 143, gold 175, tartrazine, brilliant blue 133 and other similar colouring agents suitable for use in food products. The colouring agent may also comprise suitable solvents including water and food grade acids.  
10 Suitable food grade acids include formic acid, acetic acid, citric acid and the like.

Preferably, the ink may include glycerol 35 percent by volume, solvent at 39.5 percent by volume, sucrose at 9 percent by volume, water at 18 percent by volume and colouring agent at 7.5 percent by volume.

15 **BRIEF DESCRIPTION OF THE DRAWINGS**

Embodiments of the invention will be described, by way of example only, with reference to the accompanying drawings in which:

FIG. 1 is a combined hand stamp and cutter used to produce ink marked biscuits.

20 **BRIEF DESCRIPTION OF PREFERRED EMBODIMENT**

FIG. 1 shows a combined hand stamp and cutter 10 used to make biscuits. The hand stamp and cutter 10 has been combined so that biscuit dough can be cut to a desired shape and stamped at the same time.

DETAILED DESCRIPTIONEXAMPLE 1

75 grams of carmiosine red pigment, 90g sucrose is added to 180mls of water and boiled until the carmiosine red and sucrose are dissolved.  
5 350mls of glycerol and 395mls of ethanol is then added to form the following 1litre of ink composition

35% glycerol  
39.5% ethanol  
9% sucrose  
10 18% water and  
7.5% colouring agent.

It will be readily appreciated by a person skilled in the art that solvents other than water may be used to dissolve the pigment or dye in the formation of the colouring agent will vary according to the pigment or dye being used.  
15 Other solvents may include appropriate food acids, such as formic acid.

Depending on the dye or pigment used in the formation of the ink the dye or pigment may be ground finely and suspended in the ink composition.

EXAMPLE 2

The combined stamp and cutter 10 includes a hollow cylindrical  
20 housing 11. A circular edge 12 of the housing is sharp and is used to cut biscuit dough into a circular shape. It should be appreciated that shape of the edge 12 may be changed to vary the shape of the biscuits.

A shaft 13 extends through the housing 11 substantially along a central axis of the housing 11. The shaft 13 is mounted to a top of the

housing and is able to reciprocate with respect to the housing 11.

5 A stop 14 is located on the shaft to prevent the shaft from being reciprocated past a predetermined point. An internal spring 15 and an external spring 16 are mounted to the shaft locate the shaft 13 in a desired rest position.

10 A stamp 17 is located at the end of the shaft and is located within the housing 11. The stamp 17 comprises a backing plate 18 and a stamping plate 19. The backing plate 18 is attached to an end of the shaft 13 and is removably attached to the stamping plate 19. The stamping plate 19 is normally made of plastic or rubber. The stamping plate 19 is cut to reflect the desired impression to be placed on a biscuit.

15 To make a batch of marked biscuits, biscuit dough is mixed and rolled into a sheet of desired thickness. The ink of Example 1 is applied to the stamp plate 19 through the use of an inkpad (not shown). The combined stamp plate 19 and cutter 10 is located over the inkpad and the top of the shaft 13 is pushed toward the top of the housing 11 until the stamping plate 19 contacts the inkpad. The shaft 13 is released and returns to the rest position.

20 The combined stamp and cutter 10 is placed on the sheet of biscuit dough and force is again applied to the shaft 13. This causes the stamping plate 19 to contact the biscuit dough and apply ink to the biscuit dough. At the same time, the edge 12 of the housing 11 cuts the biscuit dough to produce an image. This process is repeated until all the biscuit dough is cut. The biscuit dough is then baked to produce the batch of biscuits.

The ink provides the advantage that when applied to the biscuit dough, the ink does not bleed into the biscuit dough and hence a clear, crisp image can be produced on the biscuit. Further, the ink is not affected by baking and does not burn. The application of ink allows a quick and efficient  
5 image to be placed on a biscuit. Different colours can be used to create a more noticeable image.

It should be appreciated that the ink may be applied to the biscuit dough at using any number of different methods. For example, a self-inking stamp and cutter may be used so that the inepad is unnecessary.  
10 Alternatively, the biscuit dough may be cut separately and a separate stamp used to apply the ink to the biscuit dough. Still alternatively, the ink may be used with an automatic baking machine in which the ink is applied in an automated fashion.

The methods and inks described above may also be applied to bakery  
15 products for animal consumption, such as dog and cat biscuits.

It should be appreciated that various other changes and modifications may be made to the invention described without departing from the spirit or scope of the invention.

DATED this Nineteenth Day of March 2004

20

TRONMIST PTY LTD

By Its Patent Attorneys

FISHER ADAMS KELLY

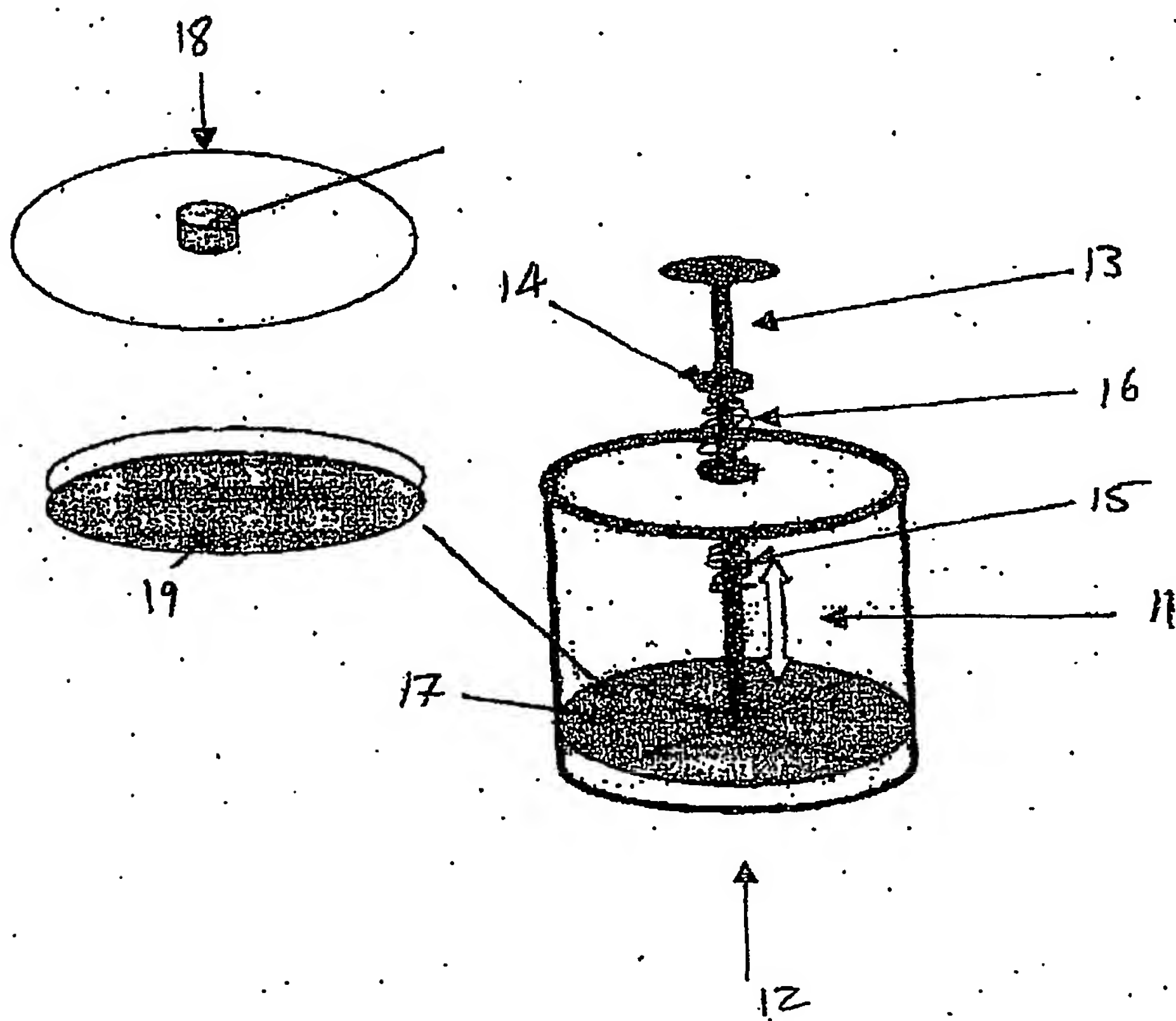


FIG 1